

**REMARKS**

Claims 1-18 are all the claims pending in the application.

Of the above claims 10-17 are withdrawn from consideration.

Claims 1-9 and 18 are rejected.

Claims 1-9 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Arai  
(JP 2003-041275 A)

Claims 1-9 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato  
(JP 2003-055677 A).

The Applicants traverse the rejections and request reconsideration.

To further distinguish the present invention from the cited references, the Applicants  
amend claim 1 to clarify that the ultrafine bubbles are below 50  $\mu\text{m}$  in diameter.

***Claim Rejections Under 35 U.S.C. 103(a)***

The Examiner has rejected the claims as being obvious over Arai, Kato and Ida. In  
responding to the Applicants argument, the Examiner noted that the Applicants have not  
provided a convincing argument as to why it would be impossible to form bubbles having a  
diameter of 50  $\mu\text{m}$  or less.

The Applicants respectfully submit a declaration under 37 C.F.R. § 1.132 executed by Dr.  
Masayoshi Takahashi providing detailed explanations as to why ultrafine bubbles of a size of  
less than 50  $\mu\text{m}$  or less is not formed in each of the cited references.

The Applicants respectfully reiterate that the size of the ultrafine bubbles (as described in detail in the response filed on September 25, 2008) and the conditions related to result in the unexpected formation of hydrated nuclei. In other words, without such a size of microbubbles, the self compression and the generation of hydrated nuclei as recited in the claimed method steps will not result. The size of the microbubbles contribute significantly to the present invention. Therefore, the Examiner's contention that the sizes can be varied by a trivial modification of the cited references is unfounded and unreasonable.

The Applicants respectfully submit that the cited references, standing alone, or in combination, do not suggest the present invention as recited in claim 1

Claims 2-9 are dependent in claim 1 and are allowable for the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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